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EPA		POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT		REGION 6	SITE NUMBER (to be assigned by Reg) 05851
GENERAL INSTRUCTIONS: Complete Sections I and III through XV of this form as completely as possible. Then use the information on this form to develop a Tentative Disposition (Section II). File this form in its entirety in the regional Hazardous Waste Log File. Be sure to include all appropriate Supplemental Reports in the file. Submit a copy of the form to: U.S. Environmental Protection Agency, Site Tracking System; Hazardous Waste Enforcement Task Force (EN-J33), 401 M St., SW, Washington, DC 20460.					
I. SITE IDENTIFICATION					
A. SITE NAME Gulf Coast Disposal Authority		B. STREET (or other identifier) 2401 Fifth Ave. South			
C. CITY Texas City	D. STATE TX	E. ZIP CODE 77590	F. COUNTY NAME Galveston		
G. SITE OPERATOR INFORMATION					
1. NAME Charles Ganze Assistant General Manager			2. TELEPHONE NUMBER (713) 488-4115		
3. STREET 910 Bay Area Blvd.	4. CITY Houston	5. STATE TX	6. ZIP CODE 77058		
H. REALTY OWNER INFORMATION (if different from operator of site)					
1. NAME Gulf Coast Disposal Authority			2. TELEPHONE NUMBER (713) 488-4115		
3. CITY Houston,	4. STATE TX	5. ZIP CODE 77058			
I. SITE DESCRIPTION Public Owned Treatment Works					
J. TYPE OF OWNERSHIP <input type="checkbox"/> 1. FEDERAL <input type="checkbox"/> 2. STATE <input type="checkbox"/> 3. COUNTY <input checked="" type="checkbox"/> 4. MUNICIPAL <input type="checkbox"/> 5. PRIVATE					
II. TENTATIVE DISPOSITION (complete this section last)					
A. ESTIMATE DATE OF TENTATIVE DISPOSITION (mo., day, & yr.)		B. APPARENT SERIOUSNESS OF PROBLEM <input type="checkbox"/> 1. HIGH <input type="checkbox"/> 2. MEDIUM <input type="checkbox"/> 3. LOW <input checked="" type="checkbox"/> 4. NONE			
C. PREPARER INFORMATION					
1. NAME Wayne Crawley		2. TELEPHONE NUMBER (409) 693-8716		3. DATE (mo., day, & yr.) 5-2-84	
III. INSPECTION INFORMATION					
A. PRINCIPAL INSPECTOR INFORMATION					
1. NAME Wayne Crawley		2. TITLE Staff Scientist		3. TELEPHONE NO. (area code & no.) (409) 693-8716	
B. INSPECTION PARTICIPANTS					
1. NAME	2. ORGANIZATION		3. TELEPHONE NO.		
Sid Johnson	K. W. Brown and Associates, Inc.		(409) 693-8716		
C. SITE REPRESENTATIVES INTERVIEWED (company officials, workers, residents)					
1. NAME	2. TITLE & TELEPHONE NO.	3. ADDRESS			
Charles Ganze	Asst. Gen. Manager (713) 488-4115	910 Bay Area Blvd. Houston, TX 77058			
Phil Cayton	Facility Supervisor (409) 945-5802	P.O. Box 470 Texas City, TX 77590			
SUPERFUND FILE					
FEB 09 1993					
REORGANIZED					

REVIEWED BY: *AD* DATE: *11-5-84*

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III. INSPECTION INFORMATION (continued)			
D. GENERATOR INFORMATION (address of waste)			
1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE GENERATED
Amoco Oil	(409) 945-1011	2401 Fifth Ave. S. Texas City, TX 77590	Petroleum
Amoco Chemical	(409) 948-1601	2800 FM 519 Texas City, TX 77590	Petro Chemical
E. TRANSPORTER/HAULER INFORMATION			
1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE TRANSPORTED
F. IF WASTE IS PROCESSED ON SITE AND ALSO SHIPPED TO OTHER SITES, IDENTIFY OFF-SITE FACILITIES USED FOR DISPOSAL.			
1. NAME	2. TELEPHONE NO.	3. ADDRESS	
Amoco Oil	(409) 945-1011	2401 Fifth Ave. S. Texas City, TX 77590	
G. DATE OF INSPECTION (Mm, day, & PM) 5/1/84			
H. TIME OF INSPECTION 3:00pm		I. ACCESS GAINED BY? (credentials must be shown in all cases)	
		<input checked="" type="checkbox"/> 1. PERMISSION <input type="checkbox"/> 2. WARRANT	
J. WEATHER (describe)			
75 - 78° overcast; gray; chance of rain, slight southern breeze			
IV. SAMPLING INFORMATION			
A. Mark 'X' for the types of samples taken and indicate where they have been sent e.g., regional lab, other EPA lab, contractor, etc. and estimate when the results will be available.			
1. SAMPLE TYPE	2. SAMPLE TAKEN (mark 'X')	3. SAMPLE SENT TO:	4. DATE RESULTS AVAILABLE
a. GROUNDWATER			
b. SURFACE WATER			
c. WASTE			
d. AIR			
e. DUNG			
f. SPILL			
g. SOIL			
h. VEGETATION			
i. OTHER (specify)		NONE TAKEN	
B. FIELD MEASUREMENTS TAKEN (e.g., radioactivity, explosivity, PH, etc.)			
1. TYPE	2. LOCATION OF MEASUREMENTS	3. RESULTS	

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[illegible]

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C. PHOTOS		IV. SAMPLING INFORMATION (continued)																																																																			
1. TYPE OF PHOTOS		2. PHOTOS IN CUSTODY OF																																																																			
<input checked="" type="checkbox"/> A. GROUND	<input type="checkbox"/> B. AERIAL	Wayne Crawley																																																																			
D. SITE MAPPED?																																																																					
<input checked="" type="checkbox"/> YES. SPECIFY LOCATION OF MAPS		attached to field book																																																																			
E. COORDINATES																																																																					
1. LATITUDE (deg.-min.-sec.)		2. LONGITUDE (deg.-min.-sec.)																																																																			
N 29° 22'		W 94° 55'																																																																			
V. SITE INFORMATION																																																																					
A. SITE STATUS																																																																					
<input checked="" type="checkbox"/> 1. ACTIVE (Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.)		<input type="checkbox"/> 2. INACTIVE (Those sites which no longer receive wastes.)																																																																			
<input type="checkbox"/> 3. OTHER (specify): _____ (Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)																																																																					
B. IS GENERATOR ON SITE?																																																																					
<input type="checkbox"/> 1. NO <input type="checkbox"/> 2. YES (specify generator's four-digit SIC Code): _____																																																																					
C. AREA OF SITE (in acres)		D. ARE THERE BUILDINGS ON THE SITE?																																																																			
approx 25 acres		<input type="checkbox"/> 1. NO <input checked="" type="checkbox"/> 2. YES (specify): small office and monitoring station																																																																			
VI. CHARACTERIZATION OF SITE ACTIVITY																																																																					
Indicate the major site activity(ies) and details relating to each activity by marking 'X' in the appropriate boxes.																																																																					
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<div style="display: flex; justify-content: space-between;"> <div>93,000,000 gal</div> <div>70,000 gal/day DAF 20,000 gal/day digester 10,000 gal/day primary solids</div> </div>																																																																					
E. SUPPLEMENTAL REPORTS																																																																					
If the site falls within any of the categories listed below, Supplemental Reports must be completed. Indicate which Supplemental Reports you have filled out and attached to this form.																																																																					
<input type="checkbox"/> 1. STORAGE	<input type="checkbox"/> 2. INCINERATION	<input type="checkbox"/> 3. LANDFILL	<input type="checkbox"/> 4. SURFACE IMPOUNDMENT																																																																		
<input type="checkbox"/> 5. DEEP WELL	<input type="checkbox"/> 6. CHEM/BIO/PHYS TREATMENT	<input type="checkbox"/> 7. LANDFARM	<input type="checkbox"/> 8. OPEN DUMP																																																																		
<input type="checkbox"/> 9. TRANSPORTER	<input type="checkbox"/> 10. RECYCLOR/RECLAIMER																																																																				
VII. WASTE RELATED INFORMATION																																																																					
A. WASTE TYPE																																																																					
<input type="checkbox"/> 1. LIQUID	<input type="checkbox"/> 2. SOLID	<input checked="" type="checkbox"/> 3. SLUDGE	<input type="checkbox"/> 4. GAS																																																																		
B. WASTE CHARACTERISTICS																																																																					
<input type="checkbox"/> 1. CORROSIVE	<input type="checkbox"/> 2. IGNITABLE	<input type="checkbox"/> 3. RADIOACTIVE	<input type="checkbox"/> 4. HIGHLY VOLATILE																																																																		
<input type="checkbox"/> 5. TOXIC	<input type="checkbox"/> 6. REACTIVE	<input type="checkbox"/> 7. INERT	<input type="checkbox"/> 8. FLAMMABLE																																																																		
<input checked="" type="checkbox"/> 9. OTHER (specify): POTW Class 2 biological sludge																																																																					
C. WASTE CATEGORIES																																																																					
1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.																																																																					
Yes, on site																																																																					

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VIII. HAZARD DESCRIPTION (continued)

☐ B. NON-WORKER INJURY/EXPOSURE

☐ C. WORKER INJURY/EXPOSURE

☐ D. CONTAMINATION OF WATER SUPPLY

☐ E. CONTAMINATION OF FOOD CHAIN

☐ F. CONTAMINATION OF GROUND WATER

☐ G. CONTAMINATION OF SURFACE WATER

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VIII. HAZARD DESCRIPTION (continued)

☐ H. DAMAGE TO FLORA/FAUNA

☐ I. FISH KILL

☐ J. CONTAMINATION OF AIR

☒ K. NOTICEABLE ODORS

Typical odors for oil refinery

☐ L. CONTAMINATION OF SOIL

☐ M. PROPERTY DAMAGE

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VIII. HAZARD DESCRIPTION (continued)

☐ N. FIRE OR EXPLOSION

☐ O. SPILLS/LEAKING CONTAINERS/RUNOFF/STANDING LIQUID

☐ P. SEWER, STORM DRAIN PROBLEMS

☐ Q. EROSION PROBLEMS

☐ R. INADEQUATE SECURITY

☐ S. INCOMPATIBLE WASTES

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VIII. HAZARD DESCRIPTION (continued)				
<input type="checkbox"/> T. MIDNIGHT DUMPING				
<input type="checkbox"/> U. OTHER (specify):				
IX. POPULATION DIRECTLY AFFECTED BY SITE				
A. LOCATION OF POPULATION	B. APPROX. NO. OF PEOPLE AFFECTED	C. APPROX. NO. OF PEOPLE AFFECTED WITHIN UNIT AREA	D. APPROX. NO. OF BUILDINGS AFFECTED	E. DISTANCE TO SITE (specify mile)
1. IN RESIDENTIAL AREAS	9,400	9,400	3000	1-2 miles
2. IN COMMERCIAL OR INDUSTRIAL AREAS	4,000	4,000	50	<1 mile
3. IN PUBLICLY TRAVELLED AREAS	15,700	15,700	0	<1 mile
4. PUBLIC USE AREAS (parks, schools, etc.)	500	500	6	<2 miles
X. WATER AND HYDROLOGICAL DATA				
A. DEPTH TO GROUNDWATER (specify well): <12 feet	B. DIRECTION OF FLOW East		C. GROUNDWATER USE IN VICINITY Shallow groundwater-none	
D. POTENTIAL YIELD OF AQUIFER unknown	E. DISTANCE TO DRINKING WATER SUPPLY (specify well or measure): unknown		F. DIRECTION TO DRINKING WATER SUPPLY unknown	
G. TYPE OF DRINKING WATER SUPPLY				
<input type="checkbox"/> 1. NON-COMMUNITY <15 CONNECTIONS* <input checked="" type="checkbox"/> 2. COMMUNITY (specify name): <u>Texas City, Texas</u> <input checked="" type="checkbox"/> 3. SURFACE WATER <input type="checkbox"/> 4. WELL				

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☐ 1. NAME
 Texas City Seawall
 Discharge Canal

☐ 2. SEWERS
☐ 3. STREAMS/RIVERS

☐ 4. LAKES/RESERVOIRS
☒ 5. OTHER (specify): Canal-Man made

Discharge stream to Galveston Bay, which is classified as suitable for contact and non-contact recreation and propagation of fish and wildlife.

XI. SOIL AND VEGETATION DATA

☐ A. KNOWN FAULT ZONE
☐ B. KARST ZONE
☒ C. 100 YEAR FLOOD PLAIN
☐ D. WETLAND
☐ E. A REGULATED FLOODWAY
☐ F. CRITICAL HABITAT
☐ G. RECHARGE ZONE OR SOLE SOURCE AQUIFER

XII. TYPE OF GEOLOGICAL MATERIAL OBSERVED

Mark 'X' to indicate the type(s) of geological material observed and specify where necessary, the component parts.

A. OVERBURDEN	B. BEDROCK (specify below)	C. OTHER (specify below)
1. SAND		
2. CLAY		
3. GRAVEL		

XIII. SOIL PERMEABILITY

☐ A. UNKNOWN
☐ B. VERY HIGH (100,000 to 1,000 cm/sec.)
☐ C. HIGH (100 to 10 cm/sec.)
☐ D. MODERATE (10 to .1 cm/sec.)
☐ E. LOW (.1 to .001 cm/sec.)
☒ F. VERY LOW (.001 to .00001 cm/sec.)

G. RECHARGE AREA

☐ 1. YES
☐ 2. NO
 3. COMMENTS:

H. DISCHARGE AREA

☐ 1. YES
☒ 2. NO
 3. COMMENTS:

I. SLOPE

1. ESTIMATE % OF SLOPE
 0-1%

2. SPECIFY DIRECTION OF SLOPE, CONDITION OF SLOPE, ETC.
 Facility perimeter slopes in so that no runoff leaves the site.

J. OTHER GEOLOGICAL DATA

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XIV. PERMIT INFORMATION							
List all applicable permits held by the site and provide the related information.							
A. PERMIT TYPE (e.g., RCRA, State, NPDES, etc.)	B. ISSUING AGENCY	C. PERMIT NUMBER	D. DATE ISSUED (mo., day, year)	E. EXPIRATION DATE (mo., day, year)	F. IN COMPLIANCE (mark 'X')		
					1 YES	2 NO	3 UNKNOWN
RCRA (storer)	EPA	TX D980625990					
Solid Waste Registration #	TWNR	32334					X
Discharge Permit Under Amoco	NPDES	TX 0003522		Past due*			X
Discharge permit	TWNR	WQ 0000443		3/31/81			X
							X

XV. PAST REGULATORY OR ENFORCEMENT ACTIONS	
<input checked="" type="checkbox"/> NONE	<input type="checkbox"/> YES (summarize in this space)

NOTE: Based on the information in Sections III through XV, fill out the Tentative Disposition (Section II) information on the first page of this form.

EPA Form T2070-2 (10-79)

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* Currently waiting for renewal of discharge permit - operating under extension.
EPA waiting on chemical effluent guidelines to be promulgated.

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RCRA 3012 Site Inspection Comments
Gulf Coast Waste Disposal Authority (GCWDA)
American Facility
HAZSIT #05851

Documentation of Site Activities

The inspection of the GCWDA American Facility, which is located within the Amoco Oil Refinery in Texas City, was conducted on May 1, 1984. Site inspectors included Wayne Crawley and Sid Johnson of K. W. Brown and Associates, Inc. and company representatives included Charles Ganze and Phillip Cayton.

The inspection began at approximately 3:00 p.m. The site is a publicly owned treatment works (POTW), with the two primary customers being Amoco Oil Company and Amoco Chemical Company. Entrance to the GCWDA facility is through the Amoco Oil Refinery. This appears to be a normal, active wastewater treatment plant. There were no apparent spills or past problem areas. The company officials stated that they had no closed disposal locations on-site.

Waste Management Practices

Waste streams (Class II nonhazardous) are delivered to GCWDA via pipelines. After treatment, the water is discharged under an NPDES permit (Texas 0003522) to the Texas City Seawall Discharge Canal. Sludge is piped back to Amoco, where it is either land farmed or is put through a secondary recovery program. For further details of the facility operation see Attachment 1.

Assessment and Conclusions

No hazardous materials are received or handled by GCWDA. It appears that the reason this site was on the RCRA 3012 list is because of a pro-

posed landfill by GCWDA near Ellington Air Force Base. The proposed landfill application was withdrawn by GCWDA. A citizen group and the mayor of a nearby town opposed this landfill and filed a complaint with the state.

There were no spills or closed facilities and, therefore, no samples were taken. After an interview and inspection of the facility, it was felt by both inspectors that this facility represented no imminent hazard to health or the environment.

0362



GULF COAST WASTE DISPOSAL AUTHORITY
AMERICAN FACILITY

The Gulf Coast Waste Disposal Authority's American Facility provides joint treatment for the waste streams from Amoco Oil and Amoco Chemicals/Plants "A" and "B." The facility provides Intermediate, Secondary and Tertiary treatment, plus waste sludge disposal. The waste streams received by the facility include typical refinery wastes from Amoco Oil and petrochemical wastes from Amoco Chemicals.

The treatment system is comprised of a series of individual processes which perform specific actions on the combined waste stream. The system was designed on an expected influent quality. The design values are listed below:

	<u>Influent</u>	<u>Effluent</u>
Flow (MGD)	23 MGD (87 MLD)	23 MGD (87 MLD)
pH	11	6-9.5
TSS	72 mg/l	20 mg/l
BOD	85 mg/l (soluble)	15 mg/l
COD	300 mg/l	80 mg/l
Oil	45 mg/l	5 mg/l
Phenols	3.0 mg/l	0.1 mg/l
NH ₃ -N	40 mg/l	10.0 mg/l

PROCESSES

The system is based upon the activated sludge process in which microorganisms remove soluble organic material from the waste stream. The microorganisms are then digested and gradually removed from the system to be disposed of as waste sludge. The steps which make up this particular adaptation of the activated sludge process are as follows:

Mixing
Dissolved Air Flotation
Equalization
Neutralization
Prefiltration
Nutrient Addition
Aeration
Clarification
Post Filtration
Sludge Thickening
Sludge Digestion
Sludge Disposal
Ballast Water Treatment

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PROCESS DESCRIPTIONS AND DESIGN

Mixing Basin

The waste streams from the individual industries are combined in the mixing basin at the head of the treatment system. A thorough mixing of these various streams is accomplished by four 15 hp (11.2 kw) 34" (1.4m) diameter submerged impeller mixers. The pH is monitored and adjusted as needed before pumping to the dissolved air units.

Dissolved Air Flotation

The wastewater is pumped out of the mixing basin to the DAF by two 8,000 gpm (30,280 l/m) 100 hp (75 kw) 66" (1.7m) diameter screw pumps. The wastewater enters two 120-foot (36.6m) x 15-foot (4.6m) SWD (side wall depth) dissolved air flotation tanks. Here most solids and oil and grease are removed for disposal at the landfill and sloop oil system, respectively. Dissolved air is introduced in the 60-foot (18.3m) diameter center ring of the tanks to form a float of the lighter solids and oils and greases. This float is then removed by four surface skimmer rakes. The heavier solids settle to the bottom and are removed by pumps which pump from the sump in the center of the tank. Each tank is designed for 4-1/2 hours retention time at 7-1/2 MGD flow. The clarified effluent flows into the existing equalization basin.

Equalization

The four hours the flow is in the equalization basin provides a buffer against any short-term shock loads which might enter the system.

Neutralization

The pH of the incoming waste is constantly monitored. Facilities for addition of caustic or acid are provided to neutralize any drastic change in the pH level. Neutralization is primarily carried out in the equalization basin.

Prefiltration

Immediately following the equalization basin are seven pressure-type mixed media filter cells through which the flow is passed on the way to the aeration basins. These filters remove oils and other suspended solids which would not be removed in the aeration step and might interfere with that process. The filters are designed to receive 5 gpm/ft² (205 l/m²), with each filter run being 12-16 hours. The design filtrate quality is 10 ppm TSS and 10 ppm Oil.

Aeration

In the aeration stage, microorganisms are brought into contact with the waste stream. Two 210 ft. (64m) diameter x 22 ft. (6.7m) SWD tanks serve as the aeration basins, each equipped with five 250 horsepower (112 kw), low speed, floating type, surface aerators. These aerators provide 3.3 pounds (1.5 kg) of oxygen per horsepower-hour and one horsepower/1000 ft.³ (28.3m³). This is more than enough to provide the dissolved oxygen necessary for the organic removal and to assure complete mixing within the tanks. Detention time within each tank is 12 hours.

Clarification

Following the aeration stage, the microorganisms and other settleable solids are removed in the clarification stage. Two 140 ft. (42.6m) x 18 ft. (5.48m) SWD tanks serve as clarifiers in which the solids settle to the bottom to be removed by suction type mechanisms. A skimming mechanism removes scum which may collect on the surface. The clarifiers are designed for an overflow rate of 750 gallons/day ft² (30,853 l/m²), an underflow rate of 4800 gallons/minute (18,168 l/m), and a detention time of 2.5 hours.

Post Filtration

Twelve (12) mixed media, pressure type filters serve to remove from the secondary stream those solids not removed by the prefilters or the clarifiers. The filters are designed for a filter rate of 4.9 gpm/ft², a filter run of 16 hours and filtrate quality of 10 ppm TSS.

Sludge Thickener

All sludge from the prefilters, clarifiers and post filters is concentrated in a gravity sludge thickener prior to going to the digester. The thickener is 70 ft. (21.3m) diameter x 14 ft. (4.3m) SWD, with a design loading of 2-6 pounds/ft²/day (10-30 kg/m²/day).

Aerobic Digester

The aerobic digester serves to stabilize the biological sludge prior to ultimate disposal. The digester is 100 ft. (30.3m) diameter x 20 ft. (6.1m) SWD, and is equipped with 75 horsepower (64 kw) floating surface aerator. Detention time in the digester is six days.

Sludge Disposal

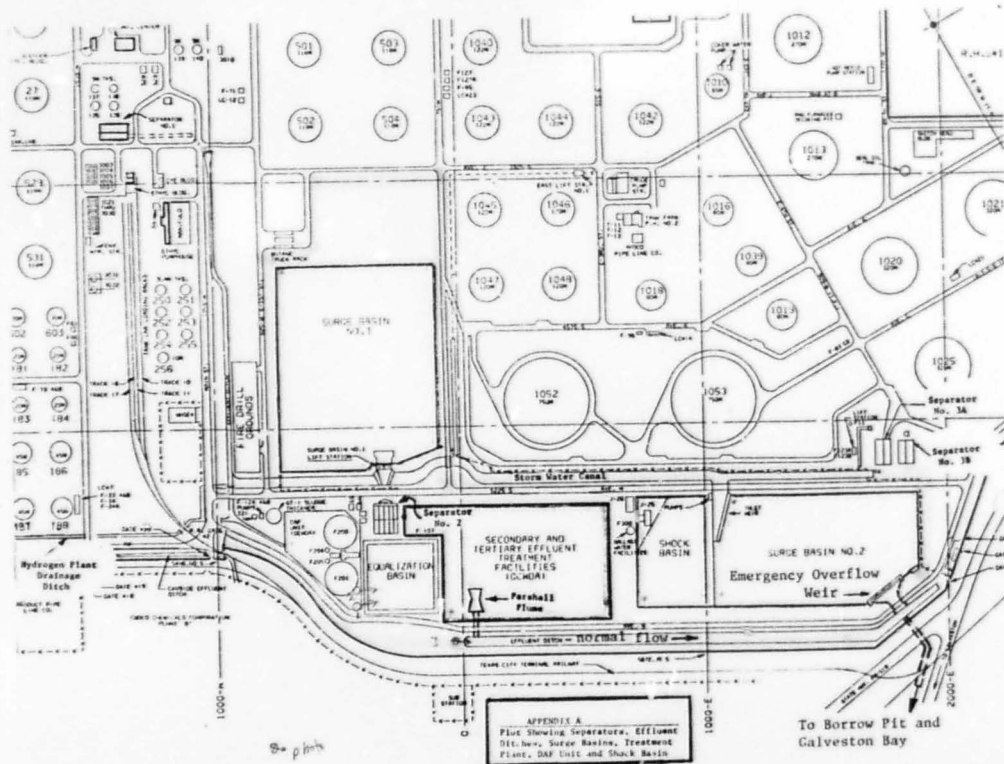
All sludges generated at the waste treatment plant are pumped to an adjacent landspreading site. Approximately 150 acres (61 hectare) has been dedicated for disposal of the sludges. The landspread site is divided into five acre (2.02 hectare) plots. Sludge carriage water and rainfall runoff is returned to the wastewater treatment facility for reprocessing. The sludges are tilled into the soil where naturally occurring soil bacteria are allowed to decompose the organic materials.

Ballast Water Treatment

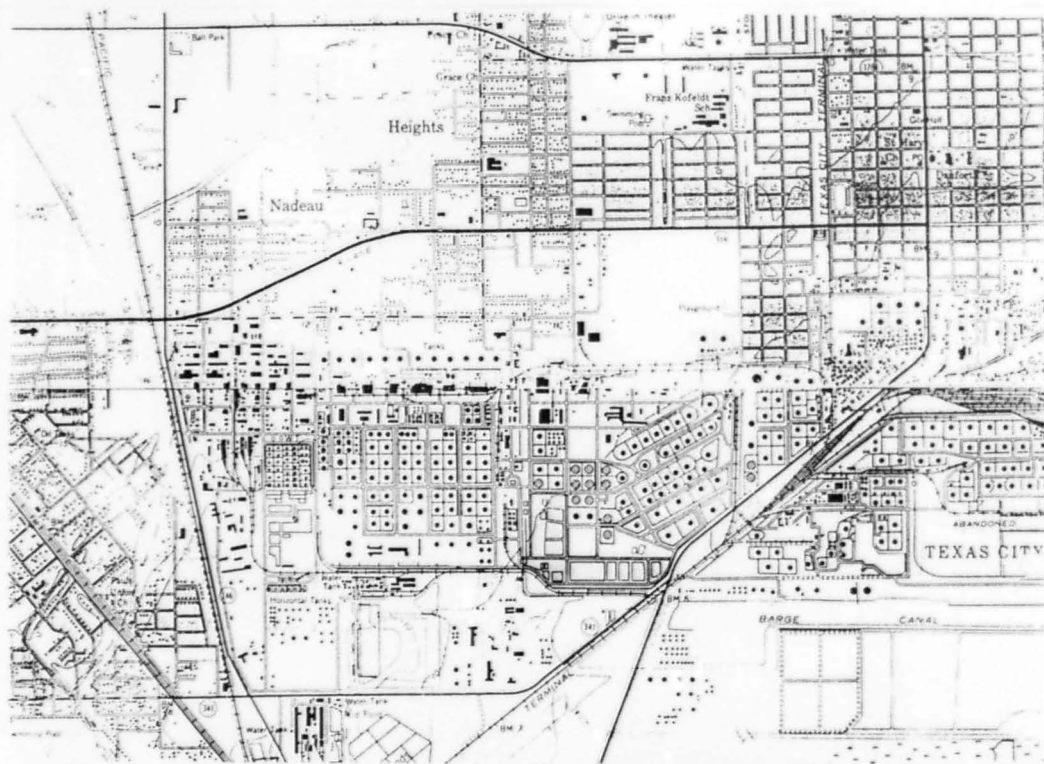
Ballast water is pumped from the docks to the ballast treatment facility via a 12-inch pipeline. It first passes through a vertical tube coalescer separator for removal of free oil and solids. There are facilities to pump off the oil and return it to Amoco's slop oil system. The effluent from the VTC separator then flows into a triangular storage basin capable of holding 400,000 gallons (1,514,000 l). The water is then pumped by a vertical pump capable of delivering 1400 gpm (5299 l/m) to a multimedia, dual flow filter for a final polishing step prior to discharge. The treated ballast water is pumped through an 8-inch fiberglass pipeline to the wastewater treatment facility's final effluent line to be measured by the parshall flume and recorded as part of the total plant flow.

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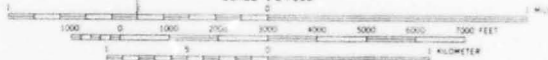


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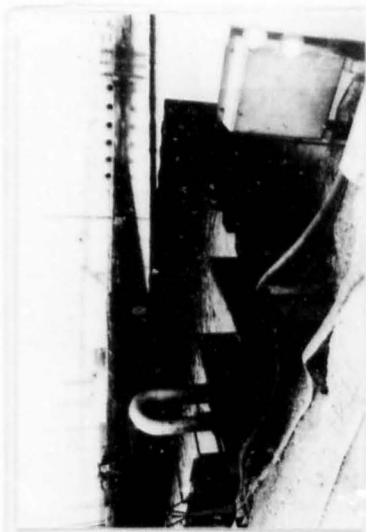


PHOTO 1
Photographer / Witness

Wayne Crawley/Sidney Johnson

Date / Time / Direction

5-1-84/3:30/East

Comments Effluent Basin

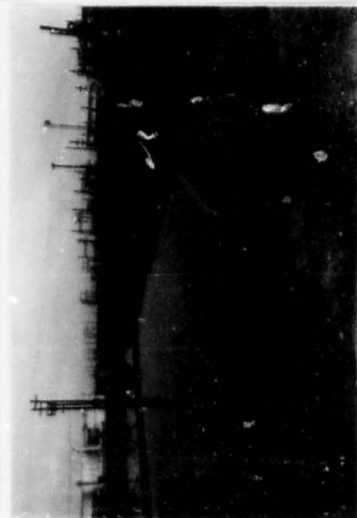


PHOTO 2
Photographer / Witness

Wayne Crawley/Sidney Johnson

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Comments Effluent Basin

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